Clarke®
air

1/2"REVERSIBLE AIR DRILL

MODEL NO: CAT60

PART NO: 3110460

OPERATING & MAINTENANCE INSTRUCTIONS

CE

GC0614

INTRODUCTION

Thank you for purchasing this CLARKE Reversible Air Drill.

Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to your purchase giving you long and satisfactory service.

IMPORTANT

Please read all of the safety and operating instructions carefully before using this product. The following safety symbols are to be found on the machine.

	Read this instruction booklet carefully before use.		Wear ear protection
	Wear eye protection		Wear dust mask.

GUARANTEE

This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

GENERAL SAFETY RULES

CAUTION: FAILURE TO FOLLOW THESE PRECAUTIONS COULD RESULT IN PERSONAL INJURY, AND/OR DAMAGE TO PROPERTY.

WORK ENVIRONMENT

1. Keep the work area clean and tidy.
2. Dress appropriately - Do not wear loose clothing or jewellery. Tie long hair out of the way.
3. Keep children and visitors away - Do not let children handle the tool.
4. Do not operate the tool where there are flammable liquids or gases.

USE OF POWER TOOLS

1. Stay alert and use common sense - do not operate the drill when you are tired or under the influence of alcohol, drugs or medication.
2. Always wear eye protectors when using the drill - Eye protectors must provide protection from flying particles from the front and the side.
3. Always wear ear protectors when using the drill.
4. Do not overreach - Keep proper footing and balance at all times.
5. Never use any type of bottled gas as a source of power for the drill.
6. Do not connect the air supply hose with your finger on the trigger of the drill.
7. Do not exceed the maximum pressure for the drill 90 psi / 6.2 bar.
8. Check hoses for leaks or worn condition before use, and ensure that all connections are secure.
9. Keep the air supply hose away from heat, oil and sharp edges.
10. Do not use the tool for any other purpose than that described in this manual.
11. Do not fit the tool to any stand or clamping device that may damage it.
12. Do not carry out any alterations or modifications to the tool.
13. Always disconnect from the air supply when:
    - Performing any maintenance
    - The drill is not in use.

- The drill will be left unattended.
- Moving to another work area.
- Passing the drill to another person.

14. Never use the tool if it is defective or operating abnormally.
15. The drill should be serviced at regular intervals by qualified service personnel.
16. Avoid damaging the drill for example by applying excessive force of any kind.
17. ALWAYS maintain the tool with care. Keep it clean for the best and safest performance.
18. Quick change couplings should not be located at the tool. They add weight and could fail due to vibration.
19. Do not force or misuse the tool. It will do a better and safer job at the rate for which it was designed.
20. Do not remove any labels. Damaged labels should be replaced.
21. This tool vibrates with use. Vibration may be harmful to your hands or arms. Stop using the tool if discomfort, a tingling feeling or pain occurs. Seek medical advice before resuming use.

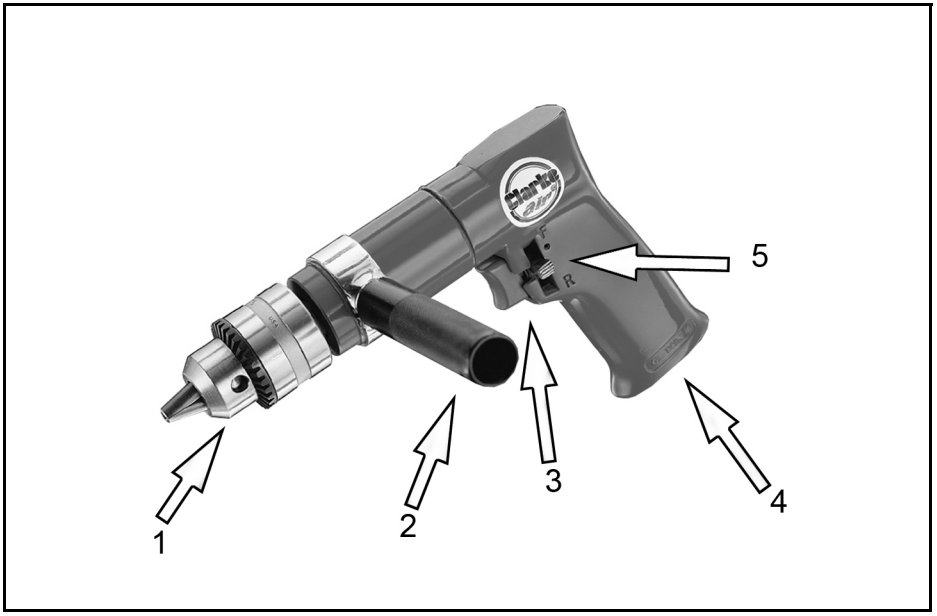
TRANSPORTATION

1. Never carry the drill by the air supply hose.
2. Never carry the drill with your finger on the trigger.

STORAGE

1. When not in use the drill must be disconnected from the air supply and stored in a dry place out of the reach of children (preferably in a locked cabinet).
2. Avoid storing the drill in environments where the temperature is below $0^{O}C$.

OVERVIEW



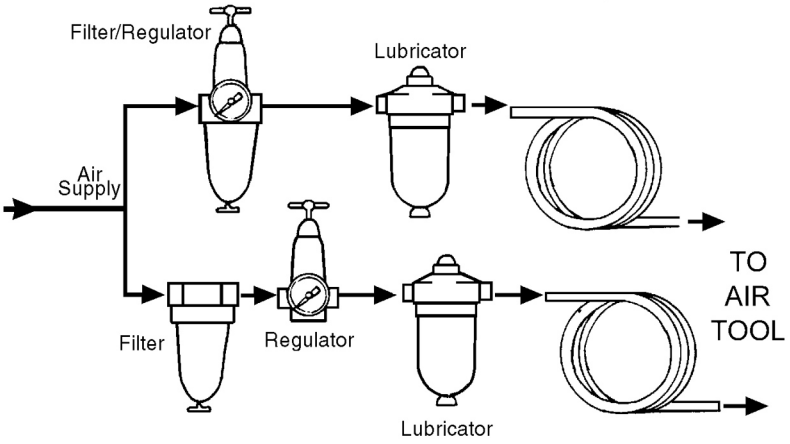
NO	DESCRIPTION	NO	DESCRIPTION
1	Chuck	4	1/4" BSP female air inlet
2	Auxiliary Handle	5	Forward/Reverse Switch
3	Trigger		

THE COMPRESSED AIR SUPPLY

AIR SUPPLY REQUIREMENTS

WARNING: COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF COMPRESSORS AND COMPRESSED AIR SUPPLY.

- Use only clean, dry, regulated compressed air as a power source.
- Air compressors used with the impact wrench must comply with the appropriate European Community Safety Directives.
- A build-up of moisture or oil in the air compressor will accelerate wear and corrosion in the impact wrench. ensure any moisture is drained from the compressor daily and the inlet filter is kept clean.
- If an unusually long air hose is required, (over 8 metres), the line pressure or the hose inside diameter may need to be increased.
- The air hose must be rated at least 150% of the maximum operating pressure of the tool.



- A typical air line layout is shown above. If an automatic in-line filter/ regulator is used, it will keep the tool in good condition, but should be regularly checked and topped up with oil. SAE 10 oil should be used, and the lubricator adjusted to approx 2 drops per minute.
- The minimum hose diameter should be 5/16"(8mm) ID and fittings should have the same internal dimensions.

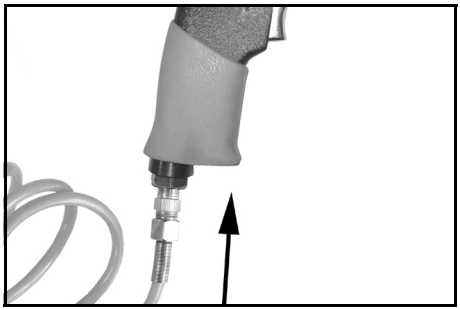
- Never exceed the maximum operating pressure for the tool. It is recommended that air pressure to this tool does not exceed 90 psi at the tool when running. Higher pressures and unclean air will shorten the life of the tool due to faster wear and is a possible safety hazard.

BEFORE USE

WARNING: COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF AIR COMPRESSORS AND COMPRESSED AIR SUPPLY.

NOTE: Ensure the air supply is turned off.

1. If required, connect an in-line mini oiler to the tool.
   - A mini oiler helps to prolong the life of the air tool. Remove the oil fill screw from the side of the mini oiler and fill with Air-line Oil available from your CLARKE dealer. Replace the screw before using the tool.
2. If a mini-oiler is not being used, run a few drops of oil through the tool before use. It can be entered through the air inlet.
3. Connect a suitable hose to the female air inlet as shown.
4. Connect the other end of the hose to the air supply.
5. Turn on the air supply and check for air leaks.
   - Rectify any found before proceeding.

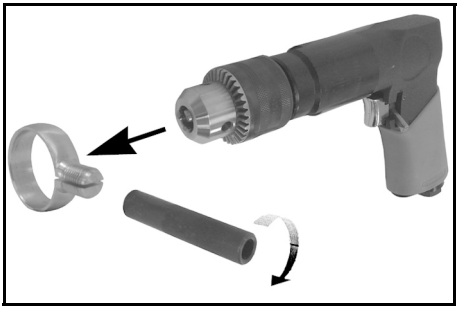


Your air tool is now ready for use.

You can fit a whip hose with a quick fit coupling if required (available from your Clarke dealer.)

FITTING THE HANDLE

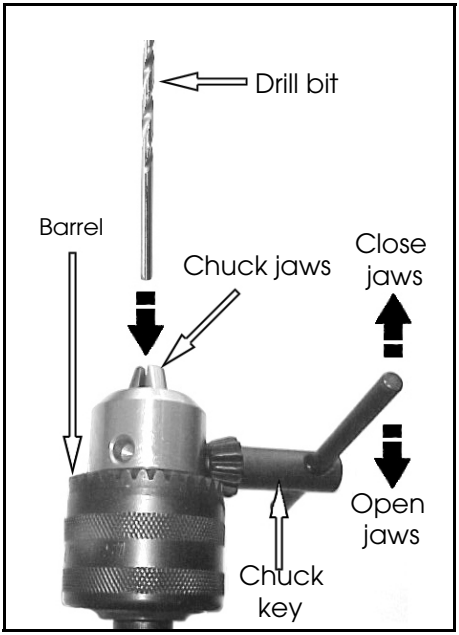
The CAT60 is supplied with an auxiliary handle. To install it proceed as follows.



1. Slide the clamping ring over the body of the drill., ensuring it rests on the flat shoulder provided.
2. Screw the handle onto the threaded part of the clamping ring until the handle assembly is tight.
    - The handle can be located at any position around the drill by loosening the handle grip and adjusting the position.

INSERTING/REMOVING THE DRILL BIT

1. Open the chuck jaws by gripping the chuck key in one of the holes in the chuck and turning it as shown.
2. Make sure that the head of the chuck key is located on the barrel of the chuck.
3. Turn the chuck key until the chuck jaws are open sufficiently to take the drill bit.
4. Place the drill bit in the jaws of the chuck as far as it will go.
5. Close the chuck jaws and tighten to grip the drill bit by turning the chuck key as shown.
6. Make sure that the chuck jaws are fully closed and that the drill bit is held firmly.
7. Your air drill is now ready for use.



KEY FOR CHUCK

OPERATION

OPERATING THE AIR DRILL

1. Squeeze the trigger to start the drill.
2. Release the trigger to stop the drill.
3. To change the direction of rotation move the lever behind the trigger from F to R.
4. Always ensure the drill has stopped before putting it down.

DISCONNECTING THE AIR SUPPLY

Do not disconnect the air supply hose until the air supply has been shut down and the compressed air released.

1. Refer to the compressor instruction manual for the procedure to shut down and release the compressed air.
2. Once the pressure has been released, disconnect the air supply hose from the air drill.

Store the tool safely in its box in a dry, secure environment.

MAINTENANCE

WARNING: MAKE SURE THAT THE DRILL IS DISCONNECTED FROM THE AIR SUPPLY BEFORE STARTING ANY CLEANING, OR MAINTENANCE PROCEDURES.

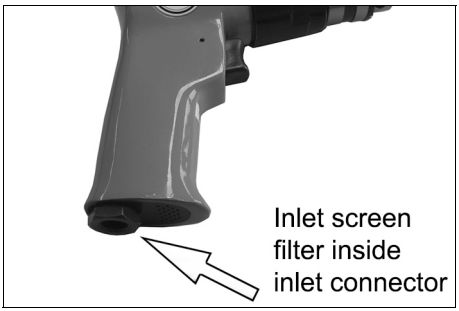
DAILY

1. Before use, drain water from the compressed air supply.
2. Pour a few drops of CLARKE airline oil, into the air inlet. This should be carried out regardless of whether or not an in-line mini oiler is used. If an

inline mini oiler is not used, this procedure should be repeated after every two to three hours of use.

WEEKLY

1. Check the air inlet screen filter for blockage and clean if necessary.



CLEANING

1. Keep the body of the tool clean and free from debris. Grit or gum deposits in the tool may reduce efficiency.

SERVICE AND REPAIR

If the tool runs erratically or becomes inefficient although the air supply is in good order, it may be necessary to dismantle the tool. Such servicing and repair work should be carried out by qualified service technicians.

PERFORMANCE

Please note that factors other than the tool may effect its operation and efficiency such as reduced compressor output, excessive drain on the airline moisture or restrictions in the air-line, or the use of connectors of improper size or poor condition which will reduce air supply.

Grit or gum deposits inside the tool may also reduce its efficiency. This condition can be corrected by cleaning out the air strainer and flushing out the tool with gum solvent or oil, or failing this, the motor may require dismantling.

**Clarke Air Line Oil (part no. 3050825) is available from your CLARKE dealer.

STORAGE

If the tool is to be stored, or is idle for longer than 24 hours, run a few drops of Clarke air line oil into the air inlet, and run the tool for 5 seconds in order to lubricate the internal parts.

When not in use, disconnect from air supply, clean tool and store in a safe, dry place.

ACCESSORIES

A wide range of accessories is available including filter/regulators, lubricators, high-pressure hoses (5 to 50 metres) etc.

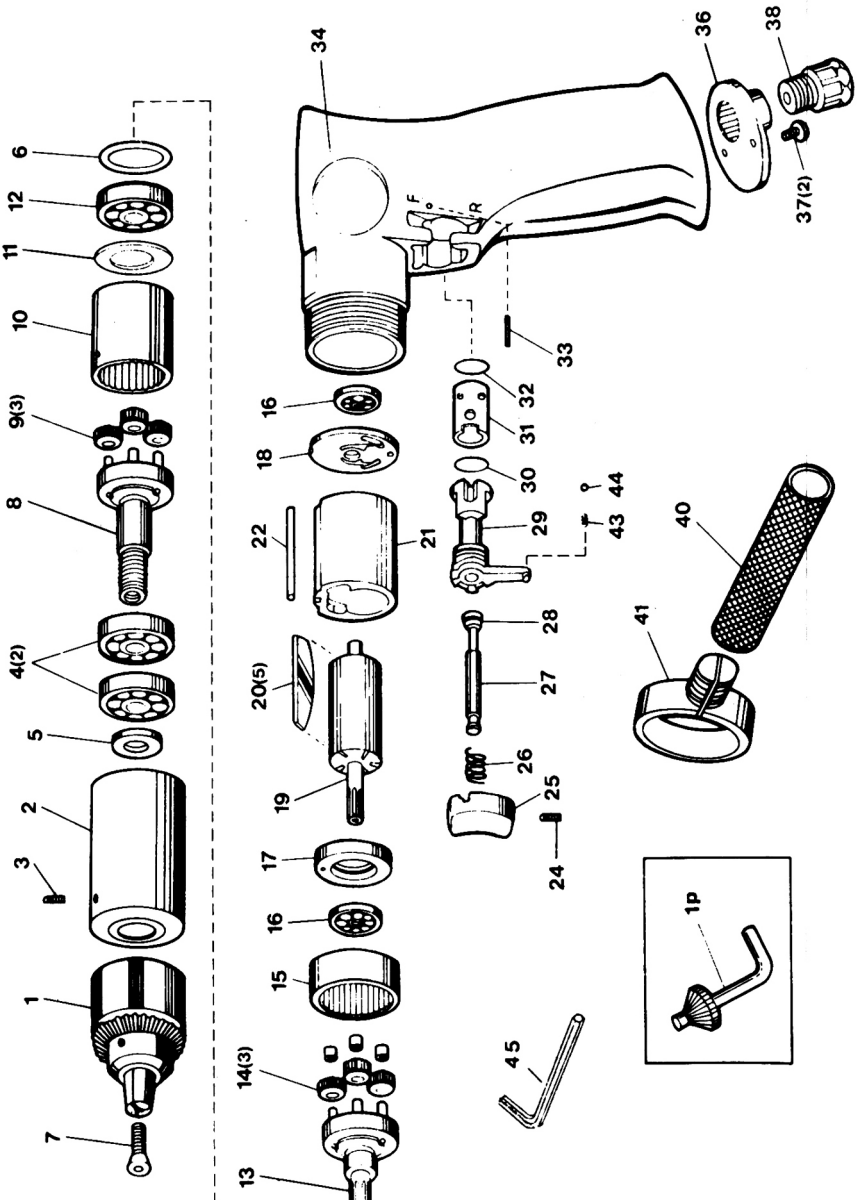
Contact your CLARKE dealer for further information or CLARKE International Service Department on 01992 565333.

TROUBLESHOOTING

SYMPTOM	PROBLEM	SOLUTION
Tool runs at normal speed but slows down under any load.	1. Excessive pressure on drill. 2. Motor parts worn. 3. Worn or sticking mechanism due to lack of lubricant.	1. Reduce the force applied to the drill. 2. Return to Clarke dealer for repair. 3. Drip air tool lubricating oil into air inlet. Allow oil to soak moving parts before using.
Tool runs slowly. Air flows weakly from exhaust.	1. Motor parts jammed with gum/dirt. 2. Regulator in closed position. 3. General airflow blocked by dirt.	1. Examine inlet air filter for cleanliness. 2. Adjust regulator to open position. 3. Operate tool in short bursts.
Tool will not run. Air flows freely from exhaust.	1. Motor vanes stuck due to buildup of foreign material.	1. Disconnect air supply and rotate tool assembly manually. 2. Try operating tool in short bursts. 3. Tap motor housing gently with a rubber mallet. 4. Drip a few drops of air tool lubricating oil into air inlet to soak moving parts.
Tool will not shut off.	1. O-rings damaged or ill-fitting in seat.	1. Return to Clarke dealer for repair.

Parts & Service: 020 8988 7400 / E-mail: Parts@clarkeinternational.com or Service@clarkeinternational.com

PARTS DIAGRAM



PARTS LIST

No	Description
1	Drill Chuck
2	Housing
3	Screw
4	Ball Bearing 6201-Z00A
5	Washer
6	Spacer
7	Screw
8	Planet Carrier
9	Planet Gear
10	Internal Gear
11	Spacer
12	Ball Bearing 6200-ZZ0A
13	Planet Carrier
14	Planet Gear with Bush
15	Planet Gear
16	Ball Bearing 0608/0626 - ZZ0A
17	Front End Plate
18	Rear End Plate
19	Rotor
20	Rotor Blade
21	Cylinder
22	Motor Pin

No	Description
23	n/a
24	Set Screw
25	Trigger
26	Spring
27	Throttle Valve
28	O-Ring
29	Reverse Valve
30	O-Ring
31	Reverse Valve Bush
32	O-Ring
33	Pin
34	Motor Housing
35	n/a
36	Exhaust Diffuser
37	Screw
38	Air Inlet
39	n/a
40	Handle
41	Clamp Ring
42	n/a
43	Detent Rubber
44	Steel Ball
45	Allen Key

SPECIFICATION

Model Numbers	CAT60
Part Number	3110460
Min. Hose Size (ID)	8 mm (5/16")
Chuck Size	1.5 - 13 mm (3/8")
Operating Pressure	90 psi (6.2 bar)
Air Consumption	4 cfm
No Load Speed	800 rpm @ 90psi
Air Inlet Size	1/4" BSP Female
Sound Pressure Level (LpA dB)	88 dB(A)
Sound Power Level (LwA dB)	100 dB(A)
Vibration Levels	0.64 m/s^2
Vibration Uncertainty K	1.5
Weight	1.8 kg

Please note that the details and specifications contained herein are correct at the time of going to print. However CLARKE International reserve the right to change specifications at any time without prior notice. Always consult the machine's data plate.

DECLARATION OF CONFORMITY

Clarke®
INTERNATIONAL

This is an important document and should be retained

DECLARATION OF CONFORMITY

We declare that this product complies with the following standards/directives:

- **89/392/EEC**
- **EN 292-2**
- **EN 60 335 - 1**
- **EN 292-2**

Description: **Air tool range**

Model No: **CAT60**

Serial (Batch) No: **See Product Data Label**

Signed: _____

Clarke INTERNATIONAL
Hemnall Street, Epping, Essex CM16 4LG

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Parts & Service: 020 8988 7400 / E-mail: Parts@clarkeinternational.com or Service@clarkeinternational.com

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